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ABSTRACT

This paper summarizes a new paradigm of instructional supervision, which shifts the focus on supervision from an examination of individual behavior to the improvement of work processes and social system components of the school district. The paradigm, called "Knowledge Work Supervision," helps teams of teachers and specially trained supervisors redesign their districts to create high-performance organizations. "Knowledge work" is any work that uses or produces knowledge to deliver products or services to customers. The paradigm was derived from literature on sociotechnical systems design, knowledge work, business process engineering, and organizational development. Given the systemic characteristics of a school district, the dominant orthodox paradigms of supervision (such as clinical supervision and supervision-as-inspection evaluation) seem inappropriate because they focus on the behavior of individual teachers. Thus, it seems appropriate to shift paradigms so that practitioners can focus on the supervision of deliberations and on supervising the boundaries between grades, levels of schooling, and the school system and its environment. Supervision would also focus on the quality and functioning of the social system in relation to the technical system. A paradigm shift may result in a better fit between supervisory processes and the purpose, goals, and outcomes of a school system that seeks to improve its effectiveness. One figure is included. (LMI)

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Supervising Knowledge Work

by

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This article summarizes a new paradigm of instructional supervision that is described in detail in a book manuscript entitled "Supervising Knowledge Work." It is also the basis of a more in-depth presentation entitled "Designing High Performance Schools Through Instructional Supervision" that will be made at the 1994 annual fall conference of the Council of Professors of Instructional Supervision.

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ABSTRACT
SUPERVISING KNOWLEDGE WORK

In 1969, Peter Drucker said "To make knowledge work productive will be the great management task of this century." Twenty four years later, in 1993, William Pasmore says "One of the most significant challenges for the 1990s and beyond lies in designing organizations to effectively manage and organize knowledge-based white collar and professional work." The article provides an overview of a new paradigm of instructional supervision that responds to this challenge within the context of school districts.

The author describes a new paradigm of instructional supervision that shifts the focus of supervision from an examination of individual behavior to the improvement of work processes and social system components of the school district. The paradigm is called *Knowledge Work Supervision*. This new paradigm helps teams of teachers and specially trained Knowledge Work Supervisors redesign their school districts to create high performance organizations.

The paradigm of *Knowledge Work Supervision* is an evolutionary step for the field of instructional supervision. This new supervisory process is derived from the literature on socio-technical systems design, knowledge work, business process reengineering, and organization development. This new approach is not thought of as "add-on" responsibilities for a supervisor; it is a completely new way of doing supervision.

In 1969, Peter Drucker said "To make knowledge work productive will be the great management task of this century." Twenty four years later, in 1993, William Pasmore says "One of the most significant challenges for the 1990s and beyond lies in designing organizations to effectively manage and organize knowledge-based white collar and professional work." The proposed paradigm of *Knowledge Work Supervision* described in this article responds to this challenge.

A paradigm is a pattern, example, or model that guides thought or behavior. Barker (1992) defines a paradigm as "...a set of rules and regulations (written and unwritten) that does two things: (1) it establishes or defines boundaries; and (2) it tells you how to behave inside the boundaries in order to be successful."

There are two paradigms of supervision in the field of education. One is Clinical Supervision (Goldhammer, 1969; Cogan, 1973; Anderson, Krajewski, and Goldhammer 1980), which is primarily espoused in the literature, and variations of it; e.g., Differentiated Supervision (Glatthorn, 1984), Developmental Supervision (Glickman, 1985), and Cognitive Coaching (Costa and Garmston, 1993; and Costa, Garmston, and Lambert, 1988). Other variations on this theme include teachers supervising teachers (e.g., Alfonso and Goldsberry, 1982) with the core supervisory process remaining focused on the classroom behavior of teachers.

The second dominant paradigm is primarily practiced in the schools (i.e., supervision-as-inspection or performance evaluation). There is no research to conclude that either paradigm is effective for improving instruction throughout an entire school system (although

anecdotal evidence seems to suggest that clinical supervision works well with some individual teachers).

Both paradigms of supervision are built on the premise that changing the behavior of individual teachers results in improved instruction. The research on improving organizations, however, does not support this premise. For example, Beer, Eisenstat, and Spector (1990) conclude that attempts to change organizations are...

> "...guided by a theory of change that is fundamentally flawed. The common belief is that the place to begin is with the knowledge and attitudes of individuals. Changes in attitudes...lead to change in individual behavior...and changes in individual behavior, repeated by many people will result in organizational change...This theory gets the change process exactly backward. In fact, individual behavior is powerfully shaped by the organizational roles people play. The most effective way to change behavior, therefore, is to put people into a new organizational context **[a redesigned organization?]**, which imposes new roles, responsibilities, and relationships on them." (p. 159)

So, if a school district wants to improve instruction throughout the district it seems that the traditional models of supervision may not be helpful. What, then, can a district do to move itself toward higher levels of organizational performance?

The answer to the preceding question lies in shifting the focus of instructional supervision from the behavior of individual teachers to a focus on redesigning the work processes and organizational structures of a school district. This can be done by working within a new paradigm of instructional supervision called *Knowledge Work Supervision*. This

paradigm is intended to help practitioners redesign, reengineer, or restructure their school districts to create high performance organizations.

The paradigm of *Knowledge Work Supervision* is an evolutionary step (see ____,19) for the field of instructional supervision. It is thought of as a new way to supervise knowledge work in schools. The supervisory process summarized in this article (a detailed description of the process is found in ____, 19), shifts the focus of supervision from the behavior of individual teachers to an assessment and redesign of the technical and social systems of a school district. This new approach is not thought of as "add-on" responsibilities for a supervisor. Instead, it is conceived of as a completely new way of doing supervision.

It is believed that practitioners working within the paradigm of *Knowledge Work Supervision* can solve the historically insoluble problem of trying to improve instruction throughout an entire school system. This belief is based on the fact that the proposed paradigm is derived from *socio-technical systems (STS) design* theory (e.g., Trist, Higgin, and Murray, 1965; and Pasmore, 1988) which has guided the redesign of hundreds of organizations throughout the world. This belief is also linked to the premise that school systems are *knowledge organizations* and that teaching is *knowledge work*.

KNOWLEDGE WORK

The author often consults and does research on organization development and change management in the business world; in particular, he specializes in "whole-system" change (e.g., business process reengineering (Hammer and Champy, 1993), restructuring, or socio-technical system design). His consulting and research brought him in contact with the literature and practices of quality improvement (e.g., Deming, 1982; Crosby, 1979, 1986;

Juran, 1989; Ishikawa, 1985; and Taguchi and Clausing, 1990), knowledge work (e.g., Drucker, 1969, 1985, 1993; Pava, 1983; and Knights, Murray, and Willmott, 1993), socio-technical systems design (e.g., Pasmore, 1988, 1992; Trist, 1969; and Lytle, 1991) and organization development (e.g., Argyris and Schön, 1974, 1978; and Burke, 1982). The concept of *Knowledge Work Supervision* is derived from the literature and practices of these areas.

Knowledge work is any work that uses or produces knowledge to deliver products or services to customers. Drucker (1993) notes that in 1880, about nine out of 10 workers made and moved things. Today that ratio is down to one out of five. The other four out of five workers, he says, are knowledge people or service workers. These workers converse on the phone, write reports, and attend meetings.

Drucker (1985) posits that the central social problem of our new, knowledge society is to make knowledge work productive and knowledge workers achieving. Increasing productivity and achievement levels may best be changed by redesigning work processes and organizational structures. The paradigm of *Knowledge Work Supervision* offers a way to achieve these goals within school organizations by redesigning, reengineering, or restructuring work processes and social system components.

The importance of learning how to manage knowledge work is also noted by Stewart (1994) when he says: "What's at stake is nothing less than learning how to operate and evaluate a business when knowledge is its chief resource and result." (p. 68) Stewart also notes that there are many examples of organizations in the business world that are responding to this challenge. For example, the Canadian Imperial Bank of Commerce (CIBC), the

Skandia Group (a financial services company), Dow Chemical, and Hughes Aircraft have made it clear that the knowledge assets of a company can be described, that processes can be developed to manage these assets, that it is possible to measure how knowledge adds value, and that managing intellectual resources improves organizational performance. And, in fact, some companies have even established specialized positions to manage knowledge assets; e.g., Dow Chemical has a director of intellectual asset management and the Skandia Group has a director of intellectual capital.

Arian Ward (1994), a leader in the area of business engineering, talks about a problem faced by knowledge organizations. He calls it "losing the recipe." He says that knowledge hard won by one team two years ago, for example, is unknown to a new team facing the same problem. Or, a new team knows the solution to a problem but doesn't know the research that underlies the solution. This lack of knowledge might result in the new team not seeing the applicability of the solution or they may not trust it. This problem, he says, creates "islands of knowledge."

Ward believes that the best way to connect, or bridge, the "islands" is to realize that knowledge takes two forms: rules-based and context-based knowledge. Rules-based knowledge follows procedures that yield one correct answer to a specific problem. Context-based knowledge takes the form of wisdom, experience, and stories--not rules--and it varies with the context of the problem being addressed. Most knowledge, according to ward, is context-based. The knowledge that teachers work with is, I think, for the most part context-based.

Leif Edvinsson (1994), a manager in the Skandia Group and the world's first director of intellectual capital, advises that to be an effective knowledge work manager one must distinguish between two kinds of intellectual capital: human capital and structural capital. Human intellectual capital is the source of innovation and renewal for an organization. However, growth in this kind of capital through hiring, training, and education must be maximized. To capitalize on this kind of intellectual capital, managers must develop and manage structural intellectual assets. Structural intellectual assets include information systems, knowledge of how to access market places, customer relations, and management processes. Structural intellectual capital counts the most, according to Edvinsson, because it is the means by which individual know-how is converted into organizational know-how. The proposed paradigm of *Knowledge Work Supervision* offers a mechanism to develop and manage structural intellectual assets in school systems.

Hubert Saint-Onge (1994), Vice President, Learning Organizations and Leadership Development for the CIBC says that intellectual capital is created by the interplay of three elements: individual skills needed to meet customer needs (i.e., human intellectual capital), organizational capabilities as demanded by the market place (i.e., structural capital), and the strength of the individual division, unit, or franchise of the organization (i.e., customer capital).

To develop their human intellectual capital, CIBC, under the leadership of Saint-Onge, started by asking a simple question "What must our people know to serve customers?" With this question as their guiding criterion, CIBC developed competency models that described the various talents needed for each category of employee. Each model contained

about four dozen competencies. Next, CIBC abolished training. Instead, they made employees responsible for their own learning by asking them to use their competency models to plan their own training and education to do their current job better--not to win a promotion. Then supervisors were expected to track how fast their teams learned and to identify gaps in required skill areas. The paradigm of *Knowledge Work Supervision* uses methods that involve teachers and "Knowledge Work Supervisors" in discussions about "what teachers need to know to serve the educational needs of students" and then guides them in the use of that knowledge to redesign their school system to serve these needs.

KNOWLEDGE WORK SUPERVISION: PARADIGMATIC CONCEPTS AND PRINCIPLES

The paradigm of *Knowledge Work Supervision* is specially designed for school organizations. A special paradigm of supervision is needed to supervise knowledge work--a paradigm that shifts the focus of supervision from the behavior of the individual professional to the work processes and social system of an organization. Peter Drucker (1993) seems to support the need for this shift:

> "An old definition of 'professionals' was people who could not be supervised in their work. That definition is now the rule rather than the exception. People on the assembly line have no choice but to perform their given task on that line. That is not true of service workers; their focus can wander from the task at hand. You cannot supervise them or, in many cases, give orders. The knowledge worker has to consider the job important and *want* to do it. You can train these workers, work on their specifications, retrain them, transfer

them, and reward them, but in their job you cannot **[emphasis added]** supervise them."

The Structure of the Paradigm

The *Knowledge Work Supervision* paradigm is depicted in Figure 1. It has four

[Insert Figure 1]

phases and is cyclical in nature. Phase 1 is an environmental scan where a district-level Steering Committee assesses the expectations and requirements of the district's environment. Phase 2 is a supervisory process to redesign the technical and social systems of a *target unit* (one school, or network of schools, that is targeted to begin the knowledge work supervision process) for the purpose of moving that school toward higher levels of organizational performance. The process is managed by a Knowledge Work Supervisor (KWS)(a role similar to those found in the Skandia Group and Dow Chemical Company cited earlier) in collaboration with a Redesign Management Team (RMT) composed of teachers. Once the improvements are made, then *Knowledge Work Supervision* strives to stabilize the changes and, then, diffuse the changes to all other schools in the district until the entire organization has been redesigned through *Knowledge Work Supervision*. This is Phase 3. After the changes have been stabilized and diffused, Knowledge Work Supervisors then begin a process of continuous improvement that identifies and acts upon opportunities for incremental improvements in both the technical and social systems of the district. This is Phase 4. After a pre-determined period of time, the district returns to Phase 1 of the paradigm. *Knowledge Work Supervision* continues for the life of the organization.

The ultimate goal of *Knowledge Work Supervision* is to redesign the technical system of the school district (which is composed of two work processes--the linear work process known as the instructional program and the non-linear work process known as classroom teaching) and the social system (which is composed of roles, quality of work life factors, and so on). Achieving this goal helps a school district move toward higher levels of organizational performance. Once the techncial and social systems are redesigned (or reengineered), then *Knowledge Work Supervision* focuses on the continuous improvement of the two processes.

A key element of the *Knowledge Work Supervision* paradigm is the process of diagnosing and improving the deliberations of teachers. Diagnosing and improving these deliberations is the key to improving knowledge work (Pava, 1983; and Pasmore, 1993). The terms associated with this process require further explanation.

The thinking process that occurs within the heads of knowledge workers is called a *deliberation* (Pava, 1983). Teachers-as-knowledge workers deliberate (or think) about many topics. Some of these topics are critical to their effectiveness on-the-job. These are called *key deliberations*. Other topics are not critical. Some even distract the knowledge worker from those topics which he or she should be deliberating. Some deliberations result in decisions; others do not. To identify the key deliberations, a list of the key work-related topics that teachers think about is made by the RMT and KWS.

Occasionally, the knowledge worker's deliberation process reaches out to solicit the input of others. Knowledge workers reach out by discussing their topics with people they think can be of help. The places where these external deliberations occur are called *forums*.

Forums can be structured (e.g., regularly scheduled team meetings), semi-structured (e.g., off-site training workshops), or unstructured (e.g., two colleagues conversing over coffee).

The people the knowledge worker includes in his or her deliberations are called *participants*. These people participate in the knowledge worker's deliberations by bringing advice, opinions, additional information, and insights to the deliberation. They also take information from the deliberation. Sometimes the knowledge worker involves the right people in his or her deliberations and sometimes he or she does not. The characteristics of the information taken to and from the forums affects the quality and effectiveness of the deliberation process.

When people take action on their deliberations, they often follow prescribed work procedures (e.g., evaluation procedures) and use technological devices to assist them (e.g., computer systems). These procedures and devices are intended to support their deliberations.

These deliberations, forums, participants, work procedures, and technological devices comprise the non-linear, non-routine conversion process of a knowledge organization. To analyze this kind of conversion process the RMT and KWS engage in a diagnostic process that focuses on variances (errors or potential errors) that exist in the deliberations, forums, participation, work procedures, and technological devices. To improve this non-routine conversion process, all other professionals in the school are taught how to control their deliberations more effectively by deliberating the right topics, reaching out to the right participants, engaging others within the right forums, applying the right work procedures, and using the right technological devices. Pasmore (1992) refers to this kind of improvement process as "managing deliberations."

CONCLUSION

The argument for reconceptualizing instructional supervision as described in this article is based on the premise that school districts are *knowledge organizations* and the work they perform is *knowledge work*. Because knowledge work is non-linear, non-routine and often chaotic, a different kind of supervision is required.

Socio-technical systems and change theory suggests that supervisors cannot analyze and improve teaching one teacher at a time. Instead, groups of teachers and supervisors must examine the content of their deliberations, the forums within which they conduct their deliberations, the people who participate in the deliberations, and supporting work procedures and devices. These groups of teachers are called Redesign Management Teams and there is one team for each school (or network of schools) in the district. The RMTs collaborate with specially trained Knowledge Work Supervisors who provide tactical guidance for the supervisory process. A district-wide Steering Committee provides strategic guidance for the entire *Knowledge Work Supervision* process.

School systems also have a linear and sequential work process called the instructional program, K - 12. This linear work process is delineated using a grade structure. There are system boundaries between the grades and similar grades are clustered into units called elementary, middle/junior high, and high schools. There are also system boundaries between each school. *Knowledge Work Supervision* analyzes this linear work process to identify and correct errors and manages the boundaries between systems.

A school system also has a social system. This system includes people, their roles, organizational culture, quality of work life, motivators, satisfiers, and so on. These variables

interact with the technical system to produce organizational outcomes. In high performing organizations, both systems are maximized in relation to each other.

Given these systemic characteristics of a school district, the dominant orthodox paradigms of supervision (i.e., clinical supervision and supervision-as-performance-evaluation) seem inappropriate because they focus almost exclusively on the behavior of individual teachers. Even those supervision models that espouse the value of managing other aspects of schooling in addition to classroom teaching (e.g., Harris, 1975) do not focus on the variables that are part of the *Knowledge Work Supervision* paradigm. If a high performance school system is desired, it makes sense, then, to reconceptualize the supervision process to support this goal. Thus, it seems appropriate to shift paradigms so practitioners can focus on the supervision of deliberations and on supervising the boundaries between grades, between levels of schooling (i.e., elementary, middle, and high school), and between the school system and its environment. In the *Knowledge Work Supervision* paradigm, supervision would also focus on the quality and functioning of the social system in relation to the technical system.

If the proposed *Knowledge Work Supervision* paradigm replaces the dominant orthodox paradigms, then there may be a better fit between supervisory processes and the purpose, goals, and outcomes of a school system that desires to become increasingly effective. If supervision becomes a process to move school districts toward higher levels of organizational performance, it could finally become a process that makes a difference for an entire school system instead of for selected teachers. And, perhaps it could also respond effectively and simultaneously to teachers' needs and the needs of the entire school system;

thereby, helping move groups of teachers and the whole organization toward higher levels of performance.

Because *Knowledge Work Supervision* is offered as a new paradigm that appears to compete with the dominant ideology of supervision, it is sure to meet with resistance. The potential for resistance was noted by Nagatomo (1993)...

> "When the rise of a new theory suggests a change of direction in scholarship, history attests to a common pattern of reaction among the established intellectual community. There is often flat dismissal or at best vehement attack in order to kill and bury the theory, especially if it signals an imminent as well as immanent possibility of shaking the secure and comfortable foundation upon which the existing paradigm of thinking rests." (pp. ix - x)

Even though the proposed paradigm may be resisted, it offers a significant paradigm shift from the focus of traditional supervision. This paradigm responds to a significant need in education for a process of instructional supervision that can improve knowledge work throughout an entire school district.

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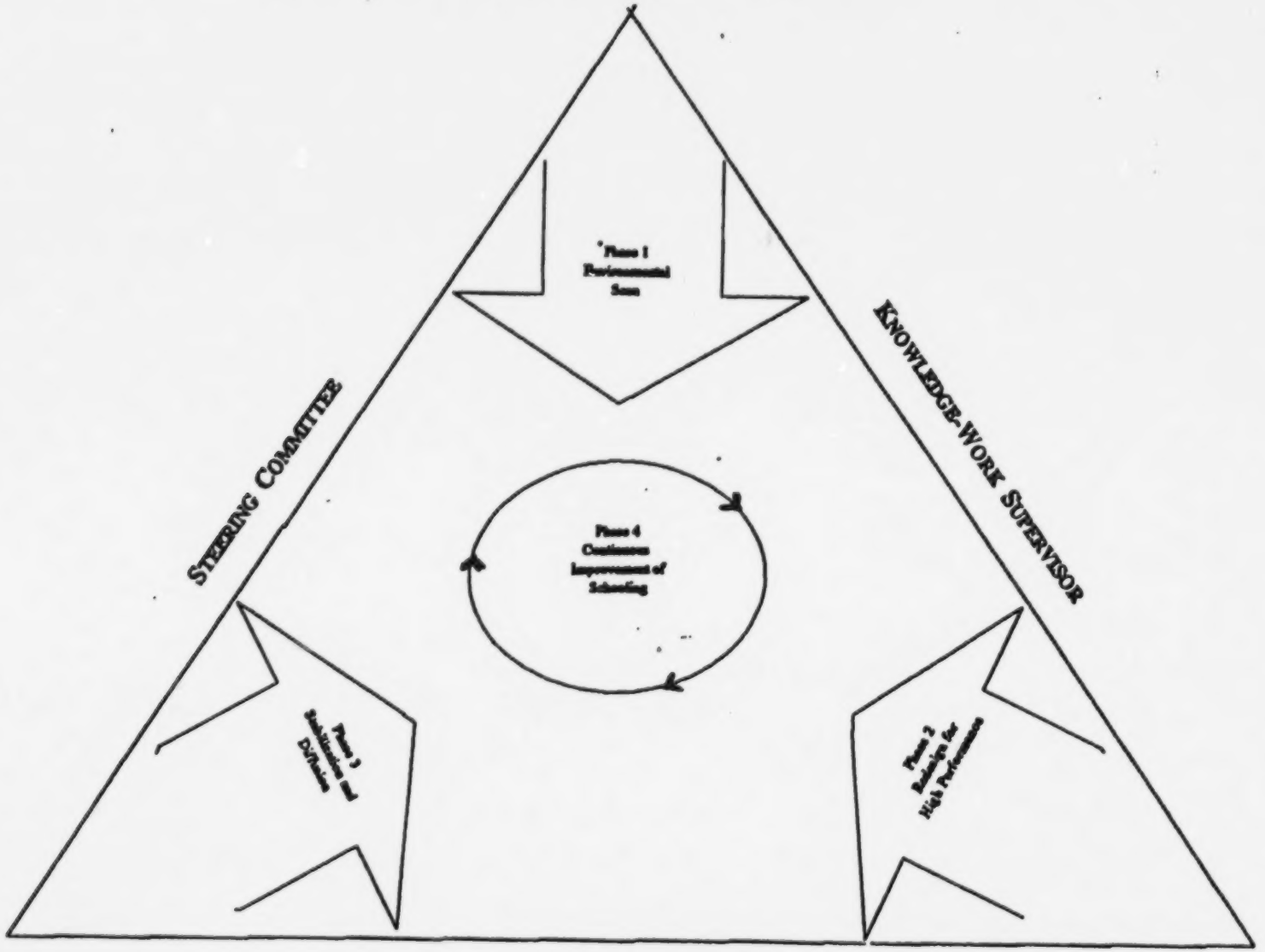
Figure 1: The Paradigm of Knowledge Work Supervision



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